12/08/26

QC1- Inspect dimensions to dimension sheet 0.00

, A

Memo y⁴

*Do not use sandpaper coarser than 320 grit.

0.00

Quality Control

110

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72/08/26

NCR: Ye	es / No		•		WORK ORDER NON	-CO	NFOR	MANCE / UPD/	ATE			•
		t*		•	•					QA Closed:	Date:	
Work Order	r:		:		DISPOSITION				AGAINST DE	•	·	, <u></u>
Part No NCR No					Scrap Machining Small Factorial Machining Sm			Crosstube Small Fab Finishing Composite	ab Rec/Store/Packaging Quali			
Root				1	ption of work order update	1	Initial	Actio		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Cl	hief Eng	Descrip	tion	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Differial Offset/Setup Other Process Supplier Fraining Unauthorized												
			<u> </u>			FAU	LT CATE	GORY		L	I	<u></u>
Landing	g Gear				Hardware			General				
	Bending P Centre No Cracks Crushed/C Inspection Other Positioned Ripples on Torque W	crimp at Strip in Wrong Inner Ba	ntric to (Bending Tube end	o/s	Breaking Missing Size/Length Spinning Threading Wrong Drill Holes Misaligned Ovalized		Finish Inspecti Inspecti Instructi Jigs/Fixt	Short entation/Data on Incomplete on Unqualified ions Incomplete/Unc	clear	Maintenand Mislabeled Off-Set Orientation Out of Calibr Out of Seque Outside Dim Over/Under Part Lost	Misread ration ence	Set-up Supplier Temperature/Cure Weld Wrong Stock Pulled Other
	Turning Se	equence		1	Over/Undersized		Kit Incor	rrect		Part Moved		

Kit Missing

Too Many

DQA:

Raw Material

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev F

June-05-12 3:37:56 PM

Quality Control

Item ID: Revision ID: Item Name:	D407-667-20 Crosstube Tur			Accept	*N900	1040	1100		Setup Sta	ı	S1*
Start Date: Required Date: Reference:	05/06/2012	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item Customer		•			" "N	S7°
Approvals:	Process Pla	n:	Date:	Tooling: SPC (Y/N):		Date:	- 	I	Run Sta Sto	I <i>Z</i> I	R1* R2*
Sequence ID/ Work Center II 120 *120*)	Operation Description MORI SEIKI CNC LATHE	E LARGE	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Mori Seiki Mori Seiki CNC Lat	he Large	2-Blend transi *Use mill bast *Do not use sa FOLIO REV:_ DWG REV:_ 3-Remove sand 4-Scribe part #	d and plugs	t sand whole tube**: tedly with file card. 20 grit. ating stylus as per Dwg D4	07-667-245				. <u>-</u>	,	mant 12/08/6
*130 *130*		QC1- Inspect dimensions to	dimension sheet	0.00					10		

man 1 108/26

NCR: Ye	es / No				WORK ORDER NON-	CONF	ORN	MANCE / UPDATE				*
		r s*						·		QA Closed:	Date:	
Work Order	r:	,			DISPOSITION			AGAINST	DE	PARTMENT/	/PROCESS	
Part No					Rework Scrap Use-as-is Work Order Update	rap Machining Small Fab s-is Thermoforming Finishing				4	d. Eng. Coor. re/Packaging Supplier Other	Engineering Quality
Root		1	Į	Descri	ption of work order update	Initi	al	Action		Sign &	,	
Cause	Date	Step	Qty		or Non-conformance	Chief		Description		Date	Verification	QC Inspector
Doc/Data		Step	- 40,		or tron comonitance	- Cities		D ddd i ption				
quip/Tooling										}		r
Operator		!										
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Offset/Setup											·	
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L	Bending P				Breaking	Bur				Maintenand	├ ──	Set-up
	Centre No	t Concer	tric to	O/S	Missing	—		nation		Mislabeled	` _	Supplier
L	Cracks				Size/Length	⊢		Short		Off-Set	<u> </u>	Temperature/Cure
<u>_</u>	Crushed/0	Crimp at	Bending	·	Spinning	<u></u>	-	ntation/Data		Orientation N		Weld
	Inspection	Strip in	Tube		Threading	Fini		At white	west	Out of Calibr	and the same of the lands of the same of t	Wrong Stock Pulled
· _	Other		•	<u>. </u>	Wrong	200		on Incomplete	TANGE.	Outlof Seque		
<u> </u>	Positioned	100		·	Drill Holes	127.00	7000000	on Unqualified		Outside Dime	gran	Öther
	Ripples on	TOTAL TRANSPORT	, -t			inst	ructi	ons incomplete/Unclear	4. A 46.6.3	Over/Under	tolerance	
	Torque W	100	464 CM. V.		Ovalized			ures/Tooling	~	Part Lost		
	Turning Se	44 - 10	7		Over/Undersized	Kit				Part Moved		
	_ Wave/Twi	st in Tub	ē.		Too.Many	Kit	Missi	ng	l	Raw Materia	1	<u>.</u>

DQA:

Date:

Wave/Twist in Tube
H:/FORMs/Quality Assurance\approved QA/NCRWO Rev F

. Work Order ID 85321 June-05-12 3:37:56 PM Item ID: D407-667-205TRN Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Turning Detail Start Date: 05/06/2012 Start Qty: 1.00 Cust Item ID: **Required Date:** 19/06/2012 Req'd Qty: 1.00 **Customer:** Reference: Run Approvals: **Process Plan:** Date: Tooling: Date: QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Work Center ID Description **Run Hours** Code Qty Otv 140 QC8- Inspect parts - second check 0.00 *140* QC 0.00 Memo Quality Control 145 0.00 *145* Crosstubes 0.00 Memo Crosstubes Grind off circumferential machining marks longitudinally. 150 Grosstubes Chemical Conversion 0.00 *150*

A

HandFXtube

Hand Finishing Crosstubes

1- Acid etch x-tube inside and out
1- Acid etch x-tube inside and out
We had scotch beite.

Ensure no sand is in the tube before alodine.

Memo

0.00

Ju, 12-8-28

Reject

Insp.

Number Stamp

12-8-28

Page 3

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE													
		e			•			-		C	QA Closed:	Da	ate:	
Work Orde	er:				DISPOSITION				AGAINST [DEP/	ARTMENT/	PROCESS		
Part N	lo				Rework Scrap			Skid-tube Machining	Crosstube Small Fab			d. Eng. Coor. e/Packaging		Engineering Quality
NCR N	lo				Use-as-is Work Order Update		Thern	noforming Large Fab	Finishing Composite			Supplier Other		
Root				Descr	iption of work order update		Initial	Act	ion	Т	Sign &			,
Cause	Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	iption		Date	Verification	'n	QC Inspector
Doc/Data									•		,			
Equip/Tooling														
Operator													1	
Material			1								· ·		-	
Offset/Setup														
Other		1												
Process		50						·						
Supplier		,								1			- 1	
Fraining														
Jnauthorized		<u> </u>	<u> </u>	<u>L</u>						丄				
						AUL	T CATE		····					
Landin	g Gear				Hardware		ı	General		- 1.				1
]_	Bending			·	Breaking		Burrs				/laintenand	e ·	-	Set-up
	Centre N	ot Conce	ntric to	o/s	Missing		Contam			_	/lislabeled			Supplier
-	Cracks				Size/Length	\vdash	Cut Too		<u> </u> _		ff-Set		-	Temperature/Cure
-	Crushed/	-		g	Spinning		,	ntation/Data	<u> </u>	_	rientation N		-	Weld
1	Inspectio	n Strip in	Tube	<u>.</u>	Threading	_	Finish				ut of Calibr			Wrong Stock Pulled
-	Other	•		<u> </u>	Wrong	1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	360	on Incomplete	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ut/of.Seque		-	
1	Positione				Drill Holes	20.00	Manufacturery 2" 12 . See	on Unqualified	TOTAL CONTRACTOR OF THE PARTY O		utside Dime		\$ 30 VT	Other
	Ripples o	1			Misaligned			ons incomplete/U		** 0	ver/Under i	tolerance	<u> </u>	The first of the second
	Torque W	The state of the s		n 🌁	Ovalized	2.3	The second second second	ures/Tooling	公舎の主要である。 を を を を を を を を を を を を を	(2)	art Lost		-,	and the same of the same
	Turning S	2.5		maran	Över/Undersized		Kit Incor	rect		≥ ا	art Moved			
The second secon	. ■ Wäve/Tw	ist in Tub	e		Too Many		Kit Miss	ng		R	aw Material			

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev F

DQA:

Date:

June-05-12 3:37:56 PM Item ID: D407-667-205TRN Accept *N900040100* Setup Start **Revision ID:** Item Name: Crosstube Turning Detail **Start Date:** 05/06/2012 Start Qty: 1.00 **Cust Item ID: Required Date:** 19/06/2012 Req'd Qty: 1.00 **Customer:** Reference: Run **Approvals: Process Plan:** Date: Tooling: Date: QC: Date: SPC (Y/N): Date: Sequence ID/ **Operation** Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID Description **Run Hours** Qty Code Qty Number Stamp QC5-Inspect Chemical Conversion Coat 160 0.00 *160* QC 0.00 Memo Quality Control 170 0.00 JW 12-8-29 *170* Packaging Packaging Memo 0.00 Packaging Identify and stock in kanban rackLocation: 180 QC21- Final Inspection - Work Order Release 0.00 MLJ 12108/30 *120* 0.00 Memo Quality Control

NCR:	Yes	/ No	,			WORK ORDER NON-	CON	NFOR	MANCE / UPDA	ATE	QA Closed:	Date	- e:	,
Work Ord	er.					DISPOSITION				AGAINST DE				
Part NCR	No.					Rework Scrap Use-as-is Work Order Update	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite			Small Fab Finishing	4 .	d. Eng. Coor. re/Packaging Supplier Other		Engineering Quality
Root					Descri	ption of work order update	li	nitial	Actio	n	Sign &		Ī	,
Cause	·	Date	Step	Qty	(or Non-conformance	Chi	ief Eng	Descrip	tion	Date	Verification		QC Inspector
Doc/Data														
Equip/Tooling													1	
Operator							İ					u	1	
Material						73			•				-	
Offset/Setup						<i>'E</i> (
Other					,	<u> </u>							ŀ	
Process													1	
Supplier											-			
Fraining														
Jnauthorized .							<u></u>				<u></u>			·
	···						AUL.	T CATE	-					
Landi	<u> </u>	•				Hardware			General		1	F	_	
	_	Bending P				Breaking		Burrs			Maintenand	ce	_	Set-up
	-	Centre No	t Concer	itric to	o/s	Missing	\vdash	Contam		<u> </u>	Mislabeled	. -		Supplier
	Ш	Cracks			<u> </u>	Size/Length	—	Cut Too			Off-Set	_	_	Temperature/Cure
		Crushed/C	-		3 <u> </u>	Spinning	-		entation/Data		Orientation I	To the state of the second		Weld
		Inspection	Strip in	Tube	ļ	Threading	⊢ ⊸1.	Finish		- 000°	Out of Calibr	2		Wrong Stock Pulled
	Ь——	Other				Wrong		Action to the second second second	on Incomplete.		Out of Seque	terror of the same		Fair Control of the C
		Positioned	or country	e de la companya de l		Drill Holes		三十二年	on Unqualified		Outside Dim			Other
		Ripples on				Misaligned		The state of the s	ions incomplete/Uno	clear	Over/Under	· · · · · · · · · · · · · · · · · · ·		A STATE OF THE STA
americani di	_	Torque)Wa	ner vitale.	xtrusio	î <u></u>	Ovalized		The state of the s	ures/Tooling	n salah	Part Lost		72 3 s.	a ¹
	-	Turning Se	Man State of the Contract of t			Over/Undersized		Kit Incoi	rect	· #	Part Moved	·		
		Wave/Twi	st in Tub	e	1 200	Too Many		Kit Miss	ing	I	Raw Materia	1		

DQA:

Date:

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Picklist Print

- June-05-12 3:37:59 PM

Work Order ID: 85321

D407-667-205TRN

Parent Item Name: Crosstube Turning Detail

85321

D407-667-205TRN

Start Date: 05/06/2012

Required Date: 19/06/2012

Start Qty: 1.00

Required Oty: 1.00

Comments:

Parent Item:

IPP Rev:A 08-03-06 new issue DD verified by:ec

IPP Rev B 08.04.02 Removed polish EC verified by: DD IPP Rev:C 08-08-19 revE as per dwg DD verified by:EC

Component Item ID/ Item Name

Replacement Mfg/ Item ID Purch Bin Primary Item Location

No

Last Location

Route Seq ID

Unit of Measure Hand

Each

Oty on Oty per Kit Total Otv

Qty Issued Date Issued

Status

D6011-115

Manufactured

120

45.0000

**

Crosstube Material

Location Loc Qty Loc Code FG 26 69802 26 LG 19 65180 18

____ man.l 12/08/25

Page 1

NCR: Y	Yes	/ No				WORK ORDER NON-O	CONFOR	MANCE / UPI	DATE	•	•	
			ı'							QA Closed:	Date:	
Work Orde	er:				:	DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N		191				Rework Scrap Use-as-is Work Order Update	4 1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	d. Eng. Coor. re/Packaging Supplier Other	Engineering Quality
Root					Descr	iption of work order update	Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Chief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material												
Offset/Setup Other Process Supplier Training Unauthorized				,							·	·
				1.	L	F	AULT CATE	GORY		-		
Landin	_	iear Bending P	accec Re	low Mir	,	Hardware Breaking	Burrs	General	ar [Maintenan	ce	Set-up
		Centre No Cracks			· · · · · ·	Missing Size/Length	Contam Cut Too	A 1795		Mislabeled Off-Set	 	Supplier Temperature/Cure
		Crushed/O Inspection Other	•	_	3	Spinning Threading Wrong	Finish	entation/Data	1	Orientation Out of Calibi Out of Seque	ration	Weld Wrong Stock Pulled
		Positioned Ripples or Torque W Turning Se)linner B aves in E	end xtrusion	n 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Drill Holes Misaligned Ovalized Over/Undersized	Instruct	ions incomplete/Uures/Tooling	Jnclear	Outside Dim Over/Under Part Lost Part Moved	" L	Other
		Wave/Twi				ToolMany	Kit Miss	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Raw Materia		

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev F

DART AEROSPACE LTD	Work Order:	85321
Description: Crosstube Assembly	Part Number:	D407-667-245
Inspection Dwg: D407-667-245 Rev: F		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

	nspection Sheet awing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
	2.490	+0.005/-0.000	2.492			vern	CWC-08
	1.832	+0.005/-0.000	1.836	/		4	
	1.838	+0.005/-0.000	1.840				
	1.892	+0.005/-0.000	1.893)			
	2.052	+0.005/-0.000	2.056				
	2.206	+0.005/-0.000	3.510				
EA	2.521	+0.005/-0.000	2.525				; 1
SIDE	2.633	+0.005/-0.000	2.635	/			
0,	4.10	+/-0.030	4.10	-		vern	CNC-CB
	4.978	+/-0.030	4.978			11	
	2.040	+0.000/-0.010	2.035			11	
	0.125	+/-0.010	.125	/		17	
	R0.063	+/-0.010	. 063			R6	
	R0.500	+/-0.010	,500			V.I	
	2.490	+0.005/-0.000	2.494	/		vern	cNC-08
	1.832	+0.005/-0.000	1.634				
}	1.838	+0.005/-0.000	1841	/			
	1.892	+0.005/-0.000	1.896				
,	2.052	+0.005/-0.000	2.067	/			
	2.206	+0.005/-0.000	2.211				
ω	2.521	+0.005/-0.000	2.525				·
SIDE	2.633	+0.005/-0.000	2636			山	
S	4.10	+/-0.030	4.100			Vern	CNC-04
	4.978	+/-0.030	4.978				
	2.040	+0.000/-0.010	2.032			(
	0.125	+/-0.010	.425	1		1	
	R0.063	+/-0.010	-063			RG	
	R0.500	+/-0.010	500			\ 1	
	112.91	+/-0.020	11291			tape	46-22

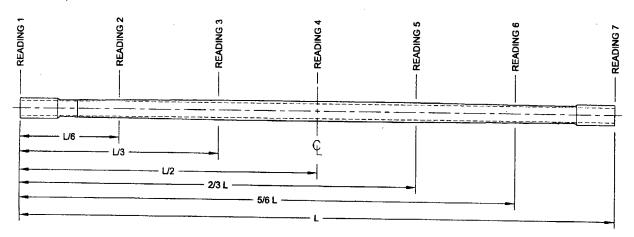
			/	• • •	<u> </u>		
Measured by:	anon r	Audited by:	JW/	P	03	Prototype Approval:	N/A
Date:	12/08/26	Date:	12-8-	27		Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	.04.04.21	New Issue (P/O D407-667-205)	KJ/RF	
В	06.03.09	Dwg Rev updated	KJ/JLM	
С	06.03.30	Tolerance revised for 4.978 dimension	KJ/JLM	
D	07.02.19	Dwg Rev updated	KJ/JLM 10	11 .
Е	09.05.20	Dwg Rev updated	KJ 🗚	77/
			7)	



DART AEROSPACE LTD	Work Order:	25371
Description: Crosstube Assembly	Part Number:	D407-667-245
Inspection Dwg: D407-667-245 Rev: F		Page 2 of 2

WALL THICKNESS MEASUREMENT



	WALI	THICKNESS	NT (IN)	Deviation		
Location	w1	w2	w3	w4	Δw (max-min)	TOLERANCE
READING 1 L= 0"	.235	.235	.230	. 227	.008	
READING 2 L=	.257	.250	.202	,204	. 055	
READING 3	. 427	.422	. 368	, 363	.064	
READING 4 L=	.666	.66Z	. 641	. 645	.025	0.075"
READING 5 L=	.409	.424	. 384	. 368	056	
READING 6 L=	. 246	.256	. 221	. 206	. 050	
READING 7 L=	. 230	. 234	.233	,230	.004	

Calibration Result

Actual Block Thickness: 100 - 500
Sitescan 250 Measured Thickness: 100 - 500

Can a	1 1 1 1 1 1 1 1 1 1		
Measured by:	Audited by: Tw	Preliminary Approval:	,
Date: 12-08-26	Date: 12-8-27	Date:	

Rev	Date	Change	Revised by Approve
Α	04.04.21	New Issue (P/O D407-667-205)	KJ/RF
В	06.03.09	Dwg Rev updated	KJ/JLM
С	06.03.30	Tolerance revised for 4.978 dimension	KJ/JLM
D	07.02.19	Dwg Rev updated	KJ/JLM
E	09.05.20	Dwg Rev updated	KJ A
F	12.06.04	Wall thickness form added	KJ JA M

NCR: Y	es / No				WORK ORDER NON-	CONFOR	MANCE-/-UI	PDATE		S. C. S. Samuel	
	•				mark of the state of the		The state of the s	and the second s	QA Closed:	Date:	and the second s
Work Orde	er:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
- The		Taning a	2.81		Rework		Skid-tube	Crosstube		Water Jet	Engineering
Part N	0.		Tall and the	g = 1, 0 g 2 - 0 g	Scrap	i I	Machining	Small Fab Finishing	-	d. Eng. Coor. re/Packaging	Quality Other
NCR N	lo			·	Use-as-is Work Order Update	- Iner	Large Fab	Composite	Rec/stor	Supplier	Other
Root				Descri	ption of work order update	Initial	А	ction	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Des	cription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator		1									
Material	_										
Setup								• •			
Other									24		
Process	_	1						•	-		
Supplier											
Training											
Unapproved		<u> </u>				AULT CATE	CORY		I		<u> </u>
	ig Gear				General	AULI CATE	GORT				
Landin	Bending				Bend	Grain			Ovalized	[-	Pressure/Forced
ŀ	Centre No	nt Concer	ntric to (_{1/5}	BOM/Route	Hardw	are		Over/Under	tolerance	Temperature/Cure
}	Cracks	or correct	iti ic to t),3 -	Broken/Damaged		tion Incomplete		Part Incorred	 	Weld
ŀ	Crushed/	Crimped			Burrs	\vdash	tions Incomplete	/Unclear	Part Lost/Mi	-	Wrong Stock Pulled
-	Cuffs		,	<u> </u>	Contamination	 	enance	·	Part Moved	·	_ ~
f	Heat Trea	it			Countersink	Mislab			Positioned V	Vrong	
ļ	Inspection		Tube		Cut Too Short	Misrea	d	ļ ——	Power Loss/	Surge	Other
ŀ	Ripples in				Drill Holes	Offset			_		
ļ	Torque W		xtrusion	,	Drawing	Out of	Calibration				
	Turning S	equence			Finish	Out of	Out of Sequence				

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

I te m	QTY		
	-245	PART NUMBER	DÉSCRIPTION
1	X	D407-667-245	CROSSTUBE ASSEMBLY (407 HIGH AFT)
<u> </u>		D0044 445	
2	1	D6011-115	CROSSTUBE
3	2	D2856-400-773	ABRASION STRIP
4	2	D2873-043	NUT PLATE
5	2	D2873-045	NUT PLATE
6	1	D2894-1	SUPPORT
7	2	D3190-1	CHAFING SHIELD
- 8	2	D3595-063-430	RUBBER CUSHION
9	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
10	4	M\$21920-22	CLAMP
11	2	MS21920-25	CLAMP (OR MS21920-24)
oxdot			
12	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947- 100, TYPE II, CLASS 2 ADHESIVE)

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6011-115 FINISHED LENGTH = 112,91+0,020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
- PAINT OUTSIDE PER DART QSI 005 4.2 TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-245" AND BATCH NUMBER ON

- INSIDE OF CUFF USING VIBRATING STYLUS.

 7) WEIGHT: 27.7 Ibs
 8) PART IS SYMMETRIC ABOUT CENTERLINE.
 9) RUN-OFF PART, BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
 INSTALL D2894-1 CENTER SUPPORT ÚSING A 0.03° TO 0.06° THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO
- 13) INSTALL MS21920-25 CLAMPS WITH D3595-063-430 RUBBER CUSHIONS TO SECURE D2894-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE
 - NOTE: MS21920-24 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS. ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, PER QSI 035.
- 16) INSTALL D3190-1 CHAFING SHIELDS SO THAT OVERLAP IS ON BOTTOM SIDE OF CROSSTUBE OPPOSITE D2894-1 SUPPORT.
- 17) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

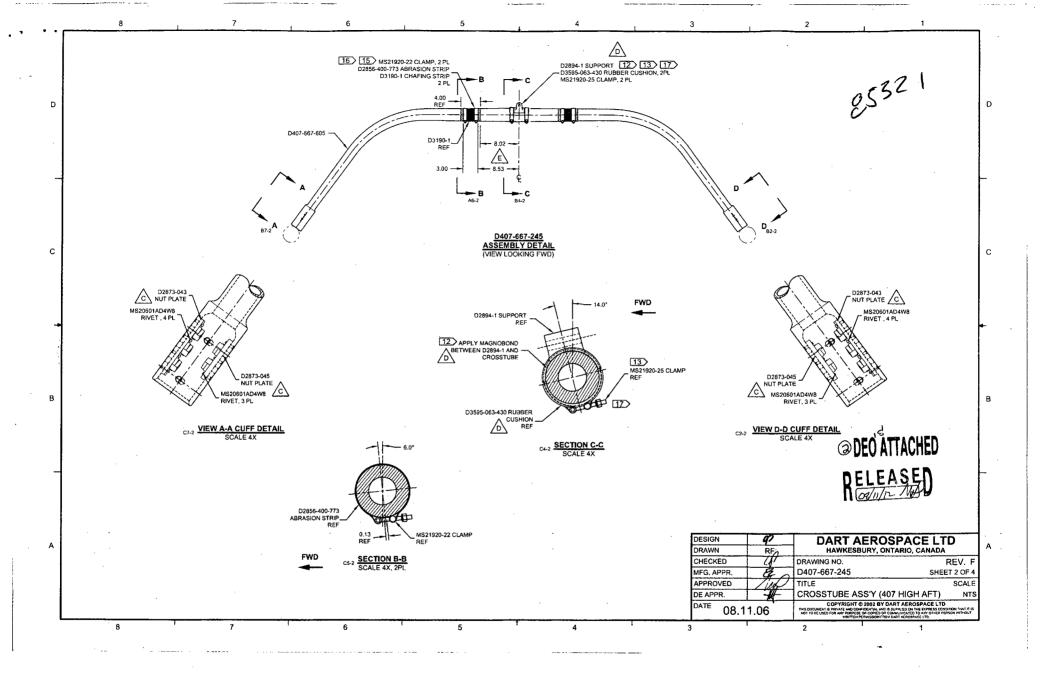
SHOP COPY RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER NO_85321 MLJ

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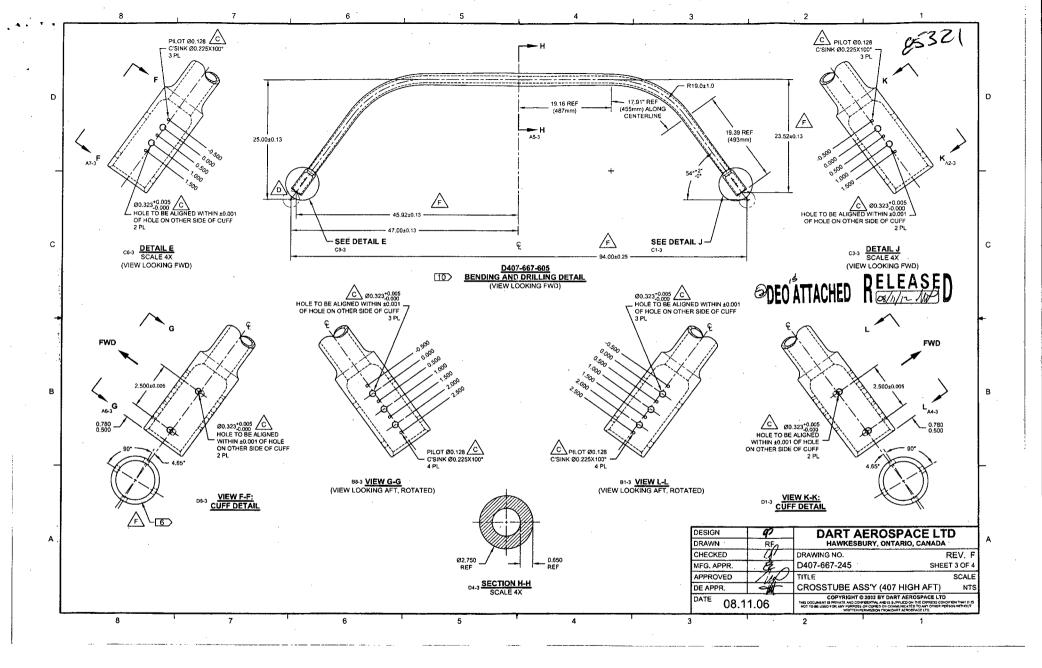
F	REFORMAT NOTES TO NEW STANDARDS (ZN 88-1); RELOCATED FLAG # 6 (ZN A8-3) PER NCR 210; REMOVED REF. & ADD TOLERANCES (ZN C6-3, C4-3 & D2-3)	RF	08.11.06
E	8.02 AND 8.53 WERE 8.40 AND 8.90 (ZN D5-2); REORGANIZED VIEWS AND REFORMATED DRAWING TO CURRENT STANDARDS. REASONS: CLAMPS MOVED 0.375 TOWARD OL TO ELIMINATE INTERFERENCE WITH AIRCRAFT MOUNTS. REFERENCE: PAR808-21 AND EC	мв	08.07.24
D	ADD VIEW FOR OEM SKID HOLES, ROTATE ORIENTATION OF CLAMPS SECTION F-F, REMOVE -851 ABRASION STRIP, ADD MAGNOBOND 6398, ADD CUSHION	PH	07.02.07
С	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT/AA SKIDTUBES	PH	05.07.26
В	ADD CHAFING SHIELD	CP	03.05.21
· A	NEW ISSUE	CP	02.05.13
REV.	DESCRIPTION	BY	DATE

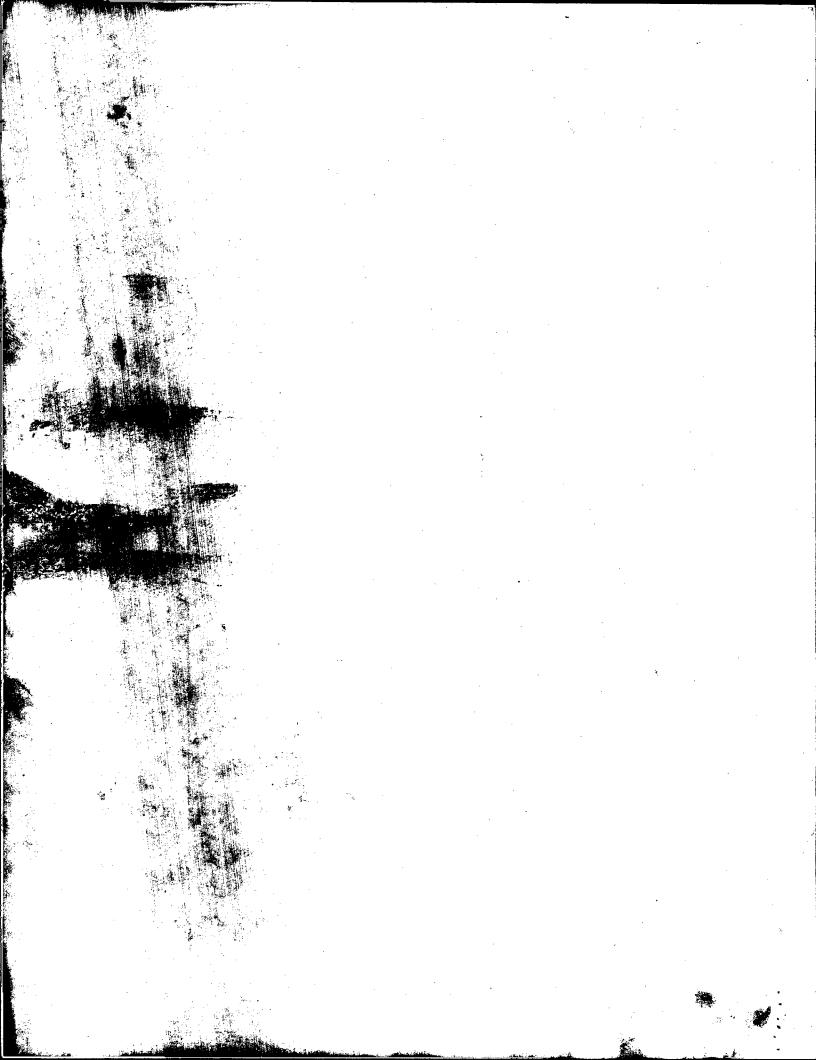
DESIGN	P	DART AEROSPACE	LTD
DRAWN	RF ₂	HAWKESBURY, ONTARIO, CANA	NDA .
CHECKED	a	DRAWING NO.	REV. F
MFG. APPR.	80	D407-667-245 s	HEET 1 OF 4
APPROVED	111	TITLE	SCALE
DE APPR.	-711-	CROSSTUBE ASS'Y (407 HIGH AF	T) NTS
DATE OR 1	1.06	COPYRIGHT © 2002 BY DART AEROSPACE THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS	

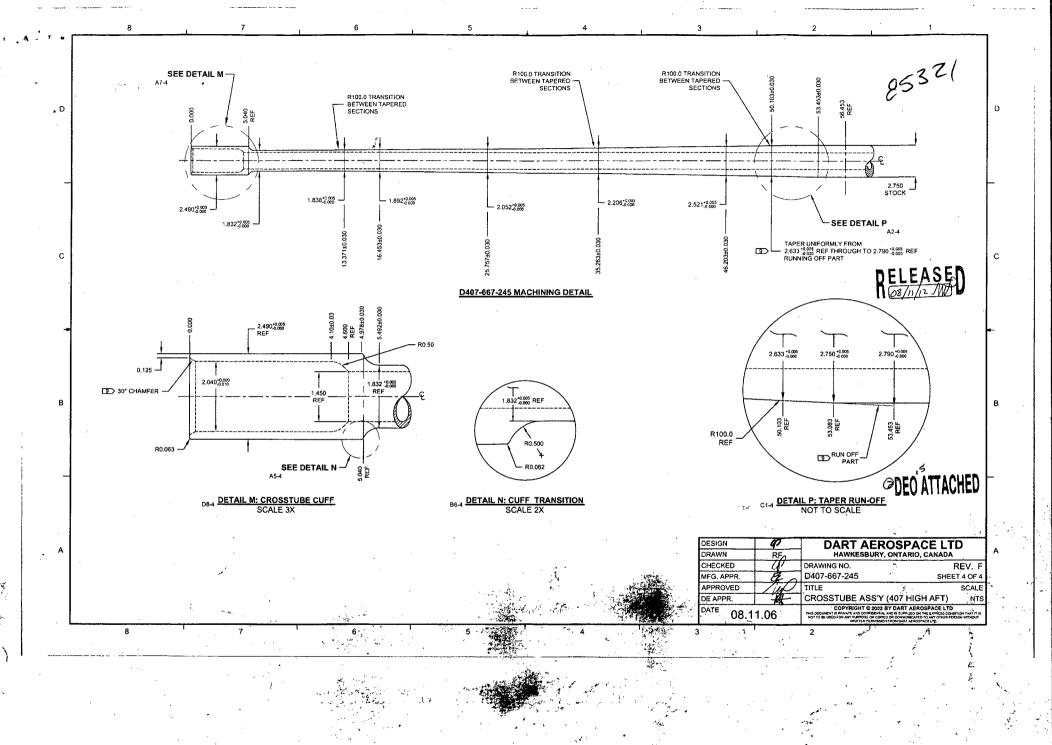
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DRAWING N	1	TILE	E 1001//		REV. F		ROSPACE L		D.E.O. NO	= ' -	SHEET	NO.	SCALE
D407-667	-245	CROSSTUB	E ASSY (4	U/ HIGH	AFI)	ENGINE	ERING ORDI	ER	D407-6	67-245-F-1	SHEET 1	OF 2	NTS
DRAWN	<u></u>		CHECKED	9	<i>)</i>	MFG. APPR.	E.	APP	ROVED	140	DE APPR.	W.	
DATE	11.04.0	8	DATE	11.04.1	2	DATE	11.04.12	DAT	=	11.04.12	DATE	1-04-12	

PURPOSE:

REMOVED ABRASION STRIP IN FAVOR OF A THIN LAYER OF PROSEAL 890.

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

IS:

Item	Qty -245	Part Number	Description
3	0	D2856-400-773	ABRASION STRIP
<u> </u>		D2000-400-773	ABRASION STRIP

WAS:

		I	
3	2	D2856-400-773	ABRASION STRIP

NOTES 2 AND 15, SHEET 1 ARE AMENDED AS FOLLOWS:

IS:

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2

MASK UNDERSIDE OF CROSSTUBE AS SHOWN (HATCHED AREA) AND

PAINT OUTSIDE PER DART QSI 005 4.2 REMOVE MASKING AND APPLY CLEAR COAT

15) APPLY A THIN COAT OF PROSEAL 890 ON INSIDE CONCAVE SURFACE OF D3190-1 CHAFING SHIELDS AND LET CURE PER MANUFACTURER'S INSTRUCTIONS. INSTALL PROSEALED D3190-1 CHAFING SHIELDS ONTO CROSSTUBE BY APPLYING A THIN COAT OF PROSEAL 890 ONTO CROSSTUBE. BE SURE TO ELIMINATE ANY AIR GAPS.

WAS:

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2

15) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 REF GAP ON BOTTOM SIDE OF CROSSTUBE PER QSI 035.

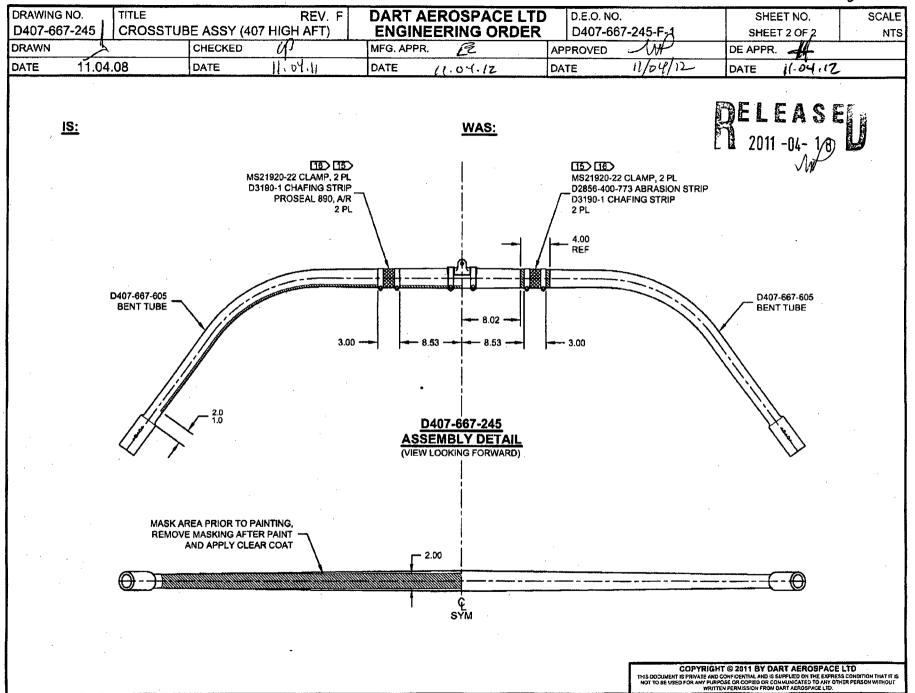
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DRAWING	NO. TITLE		REV. F	DART AE	ROSPACE LTD	D.E.O. NO.	SHEET NO.	SCALE
D407-667	7-245 CROSS	TUBE ASS'Y (407 HIGH AFT)	ENGINE	ERING ORDER	D407-667-245-E-2	SHEET 1 OF	NTS
DRAWN	P	CHECKED	ASS	MFG. APPR.	G	APPROVED W	DE APPR.	
DATE	11.09.07	DATE	11.09.19	DATE	11-09-19	DATE 11.09.19	DATE 11.09.19	

PURPOSE:

REPLACE MAGNOBOND WITH 3M DP460 SCOTCH-WELD EPOXY ADHESIVE

CHANGE:

IS:

Item	Qty -245	Part Number	Description .
12	A/R	SCOTCH-WELD DP460	EPOXY ADHESIVE, 3M SCOTCH-WELD

WAS:

12	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023
			ADHESIVE (TEXTRON/BELL SPEC. 299-947-100,
		•	TYPE II, CLASS 2 ADHESIVE)

NOTE 12 & 17, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) INSTALL D2894-1 CENTER SUPPORT USING A 0.04" TO 0.07" THICK LAYER OF SCOTCH-WELD DP460 PER QSI 015. LET CURE FOR 24 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER ADHESIVE HAS CURED FOR 24 HOURS.

2011 -09- 2 9

WAS:

- 12) INSTALL D2894-1 CENTER SUPPORT USING A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

